

REMARKS

Applicant has carefully reviewed and considered the Office Action mailed on April 24, 2006, and the references cited therewith. Claims 1, 2, 3, 5, 7, 8, 13-16, 20-23, 25-29 are amended, claims 4, 6, 12, 17-19, and 30-32 are canceled, as a result, claims 1-3, 5, 7-11, 13-16, 20-29 and 33-40 are now pending in this application.

§102 Rejection of the Claims

Claims 1-3, 7, 10-11, 13, 16-18 were rejected under 35 USC § 102(b) as being anticipated by Brooks et al. (U.S. 5,753,517). Applicant traverses the rejection.

Brooks fails to teach a polymeric microsphere that encapsulates an electroactive molecule and releasing the electroactive molecule with an organic solvent from the polymeric microsphere. Brooks is limited to solubilizing a liposome to release a ferrocyanide. Further there is no teaching in Brooks that an electroactive molecule is released with an organic solvent.

Therefore claims 1-3, 7, 10-11, 13, 16-18 are patentable over Brooks as Brooks fails to teach each and every element of the invention as claimed.

§103 Rejection of the Claims

Claims 1-3, 7-11, 14-17, 20-31 were rejected under 35 USC § 103(a) as being unpatentable over Bamdad et al. (U.S. 2003/0059955) in view of Brooks (U.S. 5,753,517). Applicant traverses the rejection.

Bamdad teaches optical detection, based on size, of a nanocrystal wherein the nanocrystal serves as a substrate having a first probe attached thereto. The nanocrystal may be functionalized with an optically active molecule as a signal for a binding event. If the substrate supporting a first probe is of a different size than a substrate supporting a second probe, then the substrates can be optically distinguished based upon size. However, Bamdad fails to teach a polymeric microsphere encapsulating a plurality of electroactive molecules therein. Bamdad also fails to teach releasing a plurality of electroactive molecules encapsulated within a polymeric microsphere with an organic solvent to release the plurality of electroactive molecules from a polymeric microsphere for detection via voltammetry.

Brooks does not make up the deficiency of Bamdad as Brooks fails to teach a polymeric microsphere having a plurality of electroactive molecules encapsulated therein that are released from encapsulation with an organic solvent for detection via voltammetry. Brooks teaches detecting metal ions released from the surface of a protein target that is bound to a probe conjugated to a polystyrene surface.

Therefore, claims 1-3, 7-11, 14-17, 20-31 are patentable over Bamdad or Brooks as the references either alone or in combination fail to teach all of the elements of the invention as claimed.

Claim 5 was rejected under 35 USC § 103(a) as being unpatentable over Bamdad et al.(U.S.2003/0059955) in view of Brooks (U.S. 5,753,517) and Barbera-Guillem (U.S. 6,680,211). Applicant traverses the rejection.

Claim 5 depends from claim 1 and is patentable in light of Bamdad and Brooks for the reasons recited in support of claim 1. Further, claim 5 is patentable over Barbera-Guillem as Barbera-Guillem teaches away from Applicant's claimed invention. The fluorescent nanocrystal that is incorporated with the polymeric bead of Barbara-Guillem is not released because to do so would destroy the utility of the microsphere as a fluorescent signal for identifying a binding event using flow cytometry wherein one quantifies the intensity of the fluorescent signal associated with the bead for a binding event. The net effect of releasing the marker of Barbara-Guillem from the bead would be to increase the signal o in the background and bake the signal on the bead indistinguishable from the background thereby rendering the beads defective for their intended purpose.

Therefore claim 5 is patentable over Bamdad in view of Brooks and Barbera-Guillem.

Conclusion

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicant's attorney (505 998 6134) to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account
No. 13-4213

Respectfully submitted,

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By



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